|    | Туре | L #  | Hits       | Search Text           | DBs     | Time Stamp          |
|----|------|------|------------|-----------------------|---------|---------------------|
| 1  | BRS  | , 1. | 1497       | carbon\$5 adj support | USPAT   | 2003/03/19<br>15:36 |
| 2  | IS&R |      | 1692       | (210/198.2).CCLS.     | USPAT   | 2003/03/19<br>15:36 |
| 3  | BRS  | * ** | 1 (*       | 1 and 2               | USPAT   | 2003/03/19<br>15:40 |
| 4  | IS&R | 21   | 1          | ("4225463").PN.       | USPAT   | 2003/03/19<br>15:41 |
| 5  | IS&R |      | 1932       | (210/656-659).CCLS.   | USPAT   | 2003/03/19<br>15:42 |
| 6  | IS&R |      | 15.2       | (210/635).CCLS.       | USPAT   | 2003/03/19<br>15:42 |
| 7  | BRS  | <br> | 2564       | 2 or 5 or 6           | USPAT   | 2003/03/19<br>15:42 |
| 8  | BRS  |      | Š.         | 8 not 3               | USPAT   | 2003/03/19<br>15:43 |
| 9  | BRS  | ,83  | l d        | 1 and 7               | USPAT   | 2003/03/19<br>15:45 |
| 10 | BRS  | 110  | 176        | carbon\$5 adj bead    | USPAT   | 2003/03/19<br>15:47 |
| 11 | BRS  | 1 1  | <u>"</u> 4 | 7 and 10              | HOPAI : | 2003/03/19<br>15:47 |

|     | Comments | Error Definition | Err |
|-----|----------|------------------|-----|
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| L      | 5 8   | Search Text                                      | DB     | Time stamp |
|--------|-------|--|--------|------------|
| Number |       | · -  |        | Time Stamp |
| 1      | .,;47 | carbon\$5 adj support                            | USPAT  | 2003/03/19 |
| 2      | 6.1   | (2! /198.2).CCLS.                                |        | 15:36      |
|        | , ,   | (8. 7130.27.CCLS.                                | USPAT  | 2003/03/19 |
| 3      |       | (carbon\$5 adj support) and                      | USPAT  | 15:36      |
|        |       | (( 1/198.2).CCLS.)                               | OSPAI  | 2003/03/19 |
| }      |       | ("4.25463").PN.                                  | USPAT  | 2003/03/19 |
|        |       |  | 1      | 15:41      |
| 5      | . 13. | (2: /656-659).CCLS.                              | USPAT  | 2003/03/19 |
| 5      |       | (2) (C25) CGT C                                  |        | 15:42      |
|        | ***   | (21./635).CCLS.                                  | USPAT  | 2003/03/19 |
| 7      | ٠.,   | (()/198.2).CCLS.) or                             |        | 15:42      |
|        |       | ((2.0/656-659).CCLS.) or                         | USPAT  | 2003/03/19 |
|        |       | ((2.0/635).CCLS.)                                | 1      | 15:42      |
| 9      |       | ((carbon\$5 adj support) and                     | USPAT  | 2003/03/19 |
|        |       | (((110/198.2).CCLS.) or                          | 051111 | 15:43      |
|        |       | ((2.0/656-659).CCLS.) or                         |        | 10.15      |
| 4      |       | ((2.0/635).CCLS.))) not ((carbon\$5 adj          | 1      |            |
|        | S-    | support) and ((210/198.2).CCLS.))                |        |            |
|        | . (   | (cubon\$5 adj support) and ((10/198.2).CCLS.) or | USPAT  | 2003/03/19 |
| 1      |       | (2.0/656-659).CCLS.) or                          |        | 15:45      |
|        |       | (1.0/635).CCLS.))                                |        |            |
| 0      | . 7.  | carion\$5 adj bead                               | USPAT  | 2003/03/19 |
|        |       |  | OSPAI  | 15:47      |
| 1      | 1.4   | ( .10/198.2).CCLS.) or                           | USPAT  | 2003/03/19 |
|        |       | 1/656-659).CCLS.) or                             |        | 15:47      |
|        |       | ()/635).CCLS.)) and (carbon\$5 adj               |        |            |
|        |       | beau.  |        |            |

| L<br>Number |       | Search Text   | DB    | Time stamp                   |
|-------------|-------|---|-------|------------------------------|
| 1           | . 100 | carbon\$5 adj support   | USPAT | 2003/03/19                   |
| 2           | ** *  | (2:(/198.2).CCLS.   | USPAT | 15:36<br>2003/03/19          |
| 3           |       | (ca:bon\$5 adj support) and   | USPAT | 15:36<br>2003/03/19          |
| 4           |       | ("415463").PN.  |       | 15:40                        |
| 5           | -     |   | USPAT | 2003/03/19                   |
|             | . 13. | (2) / (656-659).CCLS.   | USPAT | 2003/03/19                   |
| į 6         | · , . | (2. /635).CCLS.   | USPAT | 15:42                        |
| 7           |       | //198.2).CCLS.) or  | USPAT | 15:42<br>2003/03/19          |
| '<br>' 9    |       | /656-659).CCLS.) or (()/635).CCLS.)   |       | 15:42                        |
|             |       | : 1bon\$5 adj support) and<br>:::::0/198.2).CCLS.) or<br>:/656-659).CCLS.) or         | USPAT | 2003/03/19<br>15:43          |
| 8           |       | (U. /635).CCLS.))) not ((carbon\$5 adj  |       |                              |
|             |       | cubon\$5 adj support) and (.10/198.2).CCLS.) or                                       | USPAT | 2003/03/19                   |
| 10          |       | ((2.0/656-659).CCLS.) or<br>((2.0/635).CCLS.))  |       |                              |
|             | •     | carion\$5 adj bead  | USPAT | 2003/03/19                   |
| 11          | . (*  | ((10/198.2).CCLS.) or<br>((0/656-659).CCLS.) or<br>(0/635).CCLS.)) and (carbon\$5 adj | USPAT | 15:47<br>2003/03/19<br>15:47 |

|    | Туре | L # | Hits     | Search Text           | DBs   | Time Stamp          |
|----|------|-----|----------|-----------------------|-------|---------------------|
| 1  | BRS  |     | 1197     | carbon\$5 adj support | USPAT | 2003/03/19<br>15:36 |
| 2  | IS&R |     | 1. 92    | (210/198.2).CCLS.     | USPAT | 2003/03/19<br>15:36 |
| 3  | BRS  |     | - '      | 1 and 2               | USPAT | 2003/03/19<br>15:40 |
| 4  | IS&R | ;   |          | ("4225463").PN.       | USPAT | 2003/03/19<br>15:41 |
| 5  | IS&R |     | 1932     | (210/656-659).CCLS.   | USPAT | 2003/03/19<br>15:42 |
| 6  | IS&R |     | , .2     | (210/635).CCLS.       | USPAT | 2003/03/19<br>15:42 |
| 7  | BRS  |     | ,64      | 2 or 5 or 6           | USPAT | 2003/03/19<br>15:42 |
| 8  | BRS  |     |          | 8 not 3               | USPAT | 2003/03/19<br>15:43 |
| 9  | BRS  |     |          | 1 and 7               | USPAT | 2003/03/19<br>15:45 |
| 10 | BRS  |     | <u> </u> | carbon\$5 adj bead    | USPAT | 2003/03/19<br>15:47 |
| 11 | BRS  | . 1 | 1        | 7 and 10              | USPAT | 2003/03/19<br>15:47 |

|     | Comments | Error Definition | Err<br>ors |  |  |  |
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| 7   |          |                  | ()         |  |  |  |
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| 10  |          | (                | )          |  |  |  |
| 1 1 |          | (                | )          |  |  |  |

US-PAT-NO: RE34910

DOCUMENT-IDENTIFIER: US RE34910 E

TITLE: Carbon-clad zirconium oxide particles

DATE-ISSUED: April 18, 1995

US-CL-CURRENT: 210/198.2; 210/502.1; 210/635; 210/656;

502/159; 502/182

; 502/402 ; 502/416 ; 502/417

APPL-NO: 08/ 042087

DATE FILED: April 1, 1993

REISSUE-DATA:

US-PAT-NO: 05108597

DATE-ISSUED: April 28, 1992

APPL-NO: 497594

DATE-FILED: March 22, 1990

----- KWIC -----

Brief Summary Text - BSTX:

The use of pyrocarbon-reinforced carbon-based supports for HPLC is also known.

For example, K. Unger et al. (U.S. Pat. No. 4,225,463) disclose porous carbon

support materials based on activated carbons and/or cokes,
which may be useful

for HPLC. The materials are prepared by treating hard activated carbon or coke

particles with solvents, and then heating them at 2400.degree. -3000.degree. C.

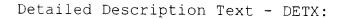
under an inert gas atmosphere. The resulting support materials are disclosed

as having a carbon content of at least 99 percent, a specific surface area of

about 1-5 m.sup.2 per gram, and a particle size of about 5-50 .mu.m (column 2,

lines 3-5).

03/19/2003, EAST Version: 1.03.0002



In order to test the chromatographic nature of the <code>carbon-clad support</code> material of the present invention, a chromatographic study was performed using a 5.times.0.46 cm HPLC column packed with the carbon-clad ZrO.sub.2 spherules of <code>Example 9</code> (toluene carbon source) as the stationary phase. A 70/30 (% v/% v) tetrahydrofuran/water solution at 35.degree. C. was used as the mobile phase.

Current US Original Classification - CCOR: 210/198.2

03/19/2003, EAST Version: 1.03.0002